TITLE OF THE INVENTION

DEVICE FOR THE RAPID MEASUREMENT OF ENZYMATIC ACTIVITY



CROSS-REFERENCE TO RELATED APPLICATIONS

(NOT APPLICABLE)

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

(NOT APPLICABLE)

INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC

(NOT APPLICABLE)



BACKGROUND OF THE INVENTION

(1) Field of the Invention

The present invention relates to a device for the rapid measurement of an enzymatic activity in a solid feed, comprising (i) a container designed to contain the test sample, (ii) a reagent specific for the enzyme whose activity it is desired to measure, and (iii) a buffer for dissolving the enzyme.

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The feed is preferably a solid feed which is not treated prior to the measurement.

(2) Descripton of Related Art

Feeds intended for husbandry animals are usually supplemented with enzymes whose role is mainly to improve the digestibility of the feed ration. These enzymes are usually sprayed in liquid form onto the feeds, in particular as described in patent EP 0,789,291. The enzymes can also be added in powder form to the feed.

Two problems thus arise, the first being to check the uniformity of distribution of the enzymes added to the feed, the second being to quickly and easily evaluate the activity of the enzyme(s) added to the feeds. These problems are raised in particular by feed manufacturers and breeders wishing to check the quality of the feeds they want to give to their animals. Until now, the enzymatic activity could be measured in the laboratory, thus entailing constraints in terms of logistics and delays, these

constraints being a real hindrance when an immediate result is needed.

## BRIEF SUMMARY OF THE INVENTION

The present invention satisfies this problem by providing a device for measuring the enzymatic activity of any enzyme-enriched feed intended for animal feed. This device, whose measurement is based on a colorimetric reaction, allows both a qualitative measurement of the enzymatic activity of the test sample and a semi-quantitative measurement of this sample.

## BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 shows a column for measuring enzymatic activity.

Figure 2 shows a single use tube.

## DETAILED DESCRIPTION OF THE INVENTION

Figure 1 represents one embodiment of the invention in the form of a device for measuring enzymatic activity, which is in the form of a column.

The description below can be read with regard to the figure mentioned above.

The device which is the subject of the present invention comprises a container designed to contain the test sample, a reagent specific for the enzyme whose activity it is desired to measure and a buffer for dissolving the said enzyme.

The container of this device can be, without any implied limitation, a column (Figure 1) composed of a graduated narrow bottom part (11) and a wide funnel-shaped top part (12) for introducing various reagents into the column and for mixing them during stirring. The column can also be fitted with a leakproof opening and closure system (13) such as a stopper attached to the body of the column by means of a tab (131).